REMARKS/ARGUMENTS

These remarks are made in response to the Office Action of September 17, 2003 (Office Action). As this response is timely filed within the three-month shortened statutory period, no fee is due.

In paragraph 4 of the Office Action, claims 1-8 and 13-20 have been rejected under 35 U.S.C. § 112 because of minor informalities. In response, the Applicants have amended claims 1 and 13 so that the phase "said presentation" now reads "said presenting step". Accordingly, withdrawal of the 35 U.S.C. § 112 rejection with respect to claims 1-8 and 13-20 is respectfully requested. Additionally, claim 17 was amended to correct a typographical error.

In paragraph 5, claims 1-5, 6, and 9-18 have been rejected under 35 U.S.C § 102(b) as being anticipated by U.S. Patent No. 6,088,671 to Gould *et al.* (Gould). In paragraph 18, claims 8 and 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Gould in view of U.S. Patent No. 6,539,080 to Bruce *et al.* (Bruce). In paragraph 20, claims 7 and 19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Gould.

Prior to addressing the rejections on the art, a brief review of the Applicants' invention is in order. The Applicants have developed a method, system, and apparatus for presenting database query results to a user in an auditory fashion. The use of database queries to generate user choices is a typical operation performed by Interactive Voice Response (IVR) systems. As disclosed, each choice extracted from a database query is audibly presented immediately upon its extraction rather than following the conventional process of extracting all choices and then playing them in batch. The user can respond to each choice when that choice is presented, thereby interrupting the database query and the subsequent presentation of additional choices.

This resolves the problem of extensive wait periods before any audible choices are presented to a user, which can be common when the audible choices are based upon results of complex database queries. Whenever a user selects an initially presented choice, the automated system can immediately respond in an appropriate

fashion. More particularly, when a user selection is received, the database query that generates subsequent choices can be halted before query completion as no further choices need be generated.

Turning to the rejections on the art, claims 1-5, 6, and 9-18 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Gould. In particular, the Examiner contends that Gould teaches each limitation of claims 1 and 13. In support, the Examiner has cited column 4, lines 59 – column 5, line 2; Fig. 8a; and column 6, lines 47-52.

Prior to addressing the differences between Gould and the Applicants' invention, the Applicants respectfully note that Gould was patented on July 11, 2000, and the present application was filed on February 1, 2001. As the present invention was filed less than one year after the patenting of Gould, it appears as though the 35 U.S.C. § 102(b) rejection with respect to claims 1-5, 6, and 9-18 is improper. The Applicants are proceeding, however, under the assumption that a different subsection of 35 U.S.C. § 102 was intended.

In any case, Gould is directed to speech recognition and, more particularly, to distinguishing between dictation and commands. The cited portions of Gould describe a dictation system and a dictation method for determining whether an utterance in a speech input stream should be interpreted as dictated text or a command. For each word in an input stream, Gould performs a comparison operation with a set of command words. After the comparison is made, Gould determines whether the word is a command or dictation and presents the results. This comparison is performed for each command word before presentation of the word. Significantly, Gould presents the results visually in a graphical user interface (GUI).

In contrast to the teachings of Gould, the Applicants initiate a database query operation and present each query result as it is found concurrently with the database query operation. Importantly, as Gould is directed to speech recognition, Gould provides no teaching to presenting database query results concurrently with the query operation. In fact, Gould is silent with respect to database queries in general.

Moreover, as noted above, Gould provides speech recognition results in a GUI, while the present invention, as explicitly claimed, provides database query results through an Audio User Interface (AUI).

Referring to claims 2 and 14, Gould fails to disclose terminating a database query operation responsive to a speech response. Instead, the cited portion of Gould describes a process where speech initially recognized as dictation is determined to be a command. The text, which is initially displayed through a GUI, is removed from the GUI and executed as a command.

In contrast, the Applicants' invention uses an AUI and not a GUI as does Gould. Further, claims 2 and 14 recite that a speech response selecting a query result is detected and that responsive to the detection, the database query operation is terminated. Here again, Gould describes a speech recognition process that has nothing to do with querying a database or the termination of the database query operation.

Referring to claims 5 and 17, the Applicants' invention teaches the insertion of each result item in a data structure as each query result item is found. That is, the present invention teaches that hits from a database search are placed within a list as each hit is found. In contrast, Gould describes a method in which a list of interpreted potential commands is dynamically altered as additional words are spoken by a user. As such, Gould fails to teach the features of claims 5 and 17 as claimed.

Referring to claims 6 and 18, Gould teaches the creation and utilization of an n-best list for comparing a command list with speech input. The Applicants' invention does not engage in any ranking of results. Instead, the present invention presents query results as they are found. In any case, as noted, Gould uses an n-best list for purposes of speech recognition which as nothing to do with database query operations.

Referring to claim 9, Gould teaches a method that classifies utterances as dictation or commands based upon the duration of user pauses. It should be noted that the Applicants' invention does not involve utterance interpretation for dictated text based upon pauses, but instead teaches a database management system that concurrently interacts with an AUI. Gould also does not teach a dialog manager that manages the

audible presentation of database query result items concurrently with the database operation. As such, Gould does not teach a system for presenting database query results in an audible fashion.

Referring to claim 10, Gould at column 4, lines 12-15 teaches an alternative to direct dictation where results are placed into a speech recognizer window. The user can transfer text from this window to a target application. Gould teaches nothing about using a text-to-speech processor for converting database results into speech.

Referring to claim 11, Gould teaches a method where a command can be executed in the event that a speech input has been interpreted as a command. This has nothing to do with the barge-in facility taught in the Applicants' invention, which can terminate the execution of a database query responsive a user selection of an audibly presented query result.

Referring to claim 12, Gould teaches initially displaying recognized speech in a GUI. If the speech is determined to be a command, and not dictation, the recognized text is removed from the GUI and executed as a command. This passage bears no relation to the queue and the queue manager disclosed by the Applicants. The queue and queue manager in the Applicants' invention are used to store query results as a query is being performed so that the query results can be concurrently presented to a user while the database query is executing.

In light of the above discussion, withdrawal of the 35 U.S.C. § 102(b) rejection with respect to claims 1-5, 6, and 9-18 is respectfully requested.

In paragraph 18, claims 8 and 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Gould in view of Bruce. The Examiner concedes that Gould does not explicitly teach that the AUI is a telephony interface, but contends that Bruce teaches such a limitation. In consequence, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Gould with Bruce's step of incorporating a telephony interface into an AUI speech and voice recognition system in order to create a system where information can be transmitted from two geographically removed points.

Bruce, however, fails to cure the deficiencies of Gould. While Bruce teaches that a telephone can be used as a user interface to a networked computer system, Bruce, like Gould, fails to teach or suggest that database query results can be presented through an AUI as the results are determined concurrently with the execution of the database operation. As such, neither Gould, Bruce, nor any combination thereof teach or suggest the Applicants' invention as claimed. Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejection with respect to claims 8 and 20 is respectfully requested.

In paragraph 20, claims 7 and 19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Gould. The Examiner concedes that Gould does not teach that the data structure can be a stack or database. The Examiner has taken Official Notice, however, that databases and stacks are well known in the art. Therefore, the Examiner contends that it would have been obvious to one of ordinary skill in the art at the time of the invention to include the possibility of using a stack or database data structure in order to provide a variety of storage possibilities based on need.

The Applicants respectfully note that the Official Notice taken with respect to data structures for claims 7 and 19 fails to cure the deficiencies of Gould already discussed at length. Accordingly, withdrawal of the 35 U.S.C § 103(a) rejection with respect to claims 7 and 19 is respectfully requested.

The Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. The Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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